ABSTRACT

A method for processing audio signals optimizes the listening experience for hearing impaired listeners, as well as non-hearing impaired listeners, without forcing hearing impaired individuals to feel stigmatized by requiring them to employ special hearing-impaired equipment. A user actuated controller controls a mixture of a preferred audio signal and a remaining audio signal across a range sufficiently wide enough to encompass all individuals. The preferred audio is recorded and maintained separate from all remaining audio and delivered to the listener in a manner that maintains the separateness of the preferred audio and the remaining audio. The user actuated controller includes the capability of automatically maintaining the listener established ratio in the face of changes in the audio signal. The user actuated controller enables the user to specify a range about the ratio in which the audio may vary, which permits the listener to expand the audio across a continuous range to whatever dynamic range his hearing can accommodate. The controller automatically adjusts to changes in incoming audio. The controller can react to relatively slowly moving changes or prevent short bursts of sound in the remaining audio from modifying the signal levels. The combination of the above aspects provides a heretofore not possible listening experience that can accommodate the listening desires of all listeners. The combination of the ability to control the ratio of preferred audio to remaining audio and to specify the dynamic range about the ratio in which the audio may vary, coupled with the ability of the controller to automatically adjust the signal levels in response to sudden changes in incoming audio, provides a powerful user capability that truly optimizes the listening experience for any listener.